

REMARKS

Claims 1-15, 21 and 23 are pending in this application. Claims 1 and 11 are amended. Claim 23 is new. No new matter is added. Reconsideration of the rejections in view of the following remarks is respectfully requested.

Claims Patentable over Kielbania under §102

Claims 1-5, 8, 11, 15, and 21 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,945,473 to Kielbania et al. (Kielbania). Applicants respectfully traverse this rejection.

Claim 1 recites, *inter alia*, “an aqueous solution consisting essentially of water, an aqueous resinous fiber binder, said fibers fixedly distributed in said binder, and a water-based urethane modifier.” Claim 11 recites, *inter alia*, “a fixative composition consisting essentially of water, an aqueous fiber binder and a water based polyurethane modifier.” Support for the amendments may be found in at least paragraphs [0010], [0012], [0022], [0027], [0031], [0032], [0036], [0037], and original Claim 16. Kielbania fails to disclose, teach or suggest a fiber mat comprising an aqueous solution consisting essentially of water, an aqueous resinous fiber binder, said fibers fixedly distributed in said binder, and a water-based urethane modifier as recited in independent Claim 1, or a fixative composition consisting essentially of water, an aqueous fiber binder and a water based polyurethane modifier as recited in Claim 11 of the present application.

Kielbania’s resinous binder polymeric performance enhancers (“PPEs”), the phenol, melamine, or urea formaldehyde components of the binder, are non-reactive

with the polyurethane and the ethylenically unsaturated monomer, and do not contain functional groups that render the PPEs soluble in water. As such, Kielbania's urea formaldehyde component is insoluble in water, and further requires the use of an ethylenically unsaturated monomer solvent. (Kielbania Col. 3:7-11). The use of such a solvent in Applicant's aqueous solution is not necessary. The binder of Applicant's claimed invention is soluble in water or polyurethane modifier and water. (Paragraph [0027], [0036], [0037]). According to Kielbania, the resinous binder component of its aqueous dispersion is insoluble in water and is not dispersible itself in water without the aid or use of a surfactant. (Kielbania Col. 3:7-11, Col. 6:40-60, Col. 7:26-48, Col. 8:7-20 and 39-44, Col. 9:54-56, Col. 10:20-26, and Examples and Claims). A surfactant is not necessary in Applicant's claimed aqueous solution. In Kielbanina, the compounds forming the water-dispersible polyurethanes, and the compounds forming the water-insoluble polyurethanes used as the PPE binder are mutually exclusive. (Kielbania Col. 7:45-48).

The binder of Kielbania requires the presence of three components, a water-dispersible polyurethane, a polymer prepared from an ethylenically unsaturated monomer, and at least one additional polymer, a PPE, resulting in an aqueous dispersion containing at least three discrete polymeric components. (Kielbania Col. 1:11-16, Col. 2:65-Col. 3:5, Col. 6:40-60, Ccol. 10:27-31 and 40-48, Examples, and Claims). The PPE component of the binder is insoluble in water and must be dissolved in an ethylenically unsaturated monomer, and "refers to a polymer that is contacted simultaneously with an aqueous dispersion of the water-dispersible polyurethane and the ethylenically unsaturated monomer under conditions effective to polymerize the

ethylenically unsaturated monomer.” (Col. 6:40-46, Col. 9:28-40, Col. 10:20-26). The non-aqueous resinous binder of Kielbania requires the use of the ethylenically unsaturated monomer as a solvent or surfactant. (Col. 6:51-53 and 58-60, Col. 7:37-39 and 45-48, Col. 9:54-56, Col. 10:20-26).

As presently claimed in an embodiment of Applicant’s invention, the binder does not require three polymeric components, but consists essentially of water, an aqueous resinous fiber binder, and a water-based urethane modifier. An embodiment of the present invention as claimed does not result in an aqueous dispersion containing at least three discrete polymeric components.

Therefore, Kielbania fails to teach each and every element of independent claims 1 and 11. Dependent claims 2-10, 12-15, 21 and 23 depend, directly or indirectly, from independent claim 1 or 11 and, thus, inherit the patentable subject matter of claims 1 or 11 while adding or further defining elements. Therefore, claims 1-15, 21 and 23 are patentable over Kielbania under §102. Accordingly, for at least these reasons, reconsideration and withdrawal of the rejection is respectfully requested.

Claims Patentable over the Combination of Kielbania and Heine under §103

Claims 1-15, and 21 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kielbania in view of U.S. Patent No. 6,146,705 to Heine (Heine). Applicants respectfully traverse this rejection.

For the reasons discussed above, Kielbania fails to teach the claimed aqueous resinous fiber binder. Heine also fails to teach the claimed aqueous resinous fiber binder. Therefore, the combination of Kielbania and Heine is defective for failing to

disclose, teach, or suggest the claimed aqueous resinous fiber binder. Therefore, claims 1-15, 21 and 23 are patentable over the combination of Kielbania and Heine under §103. Accordingly, for at least these reasons, reconsideration and withdrawal of the rejection is respectfully requested.

New Claim 23 recites, *inter alia*, "The fiber mat of Claim 1, wherein said fiber binder contains methylol groups." Neither Kielbania or Heine, together or separately, disclose, teach, or suggest a binder containing methylol groups. Accordingly, for at least this reason, Applicant respectfully requests allowance of Claim 23.

Conclusion

Applicants respectfully submit that the claims of the present application define patentable subject matter and that the application is in condition for allowance. Should the Examiner believe that anything further is desirable to place the application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number below.

Attached is a Request for Continued Examination and petition for a three month extension of time.

Respectfully submitted,

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